## Summary Table: Characteristics of the Ecoregions of Arkansas

Level IV Ecoregion

38a. Upper

38b. Lower

Boston

Level IV Ecoregion

39b. Dissected

Plateau-Elk

River Hills

39c. White River

39d. Central

Level IV Ecoregion

73a. Northern

Belts

73b. Northern

73c. St. Francis

Lowlands

Backswamps

73e. Grand

73f. Western

73g. Western

Prairie

Lowlands

Holocene

Lowlands

**Ouachita** 

Holocene

Ouachita

Backswamps

Level IV Ecoregion

74a. Bluff Hills

**Meander Belts** 

River

73i. Arkansas/

River

74.

Pleistocene

Valley Trains

**Meander Belts** 

Pleistocene

Valley Trains

BOSTON MOUNTAINS

Physiography

slopes, sharp ridges, and narrow valleys. 1900-

Benches on the mountainsides occur 2800/

OZARK HIGHLANDS

**Physiography** 

contribute substantially to streamflow in | mostly

the summer and fall. Many streams flow 50-200

year-round, but some dry valleys occur.

part of the Springfield Plateau. Gently

by steep V-shaped valleys. Karst

but some dry valleys occur.

sloping, narrow ridge tops are separated

features occur. Springs are common and

and fall. Streams are usually perennial

contribute to streamflow in the summer

of the Salem Plateau containing hills,

ridges, karst features, and entrenched,

but benches and bottomlands flank the

White River. Streams generally flow

year-round, reflecting the influence of

ground water, but dry valleys occur.

Undulating to hilly part of the Salem

Plateau containing hollows, ridges,

knobs, and karst features including

caves and sinkholes; along major

rivers, narrow corridors of nearly level

bottomland occur. Generally, slightly

major rivers. Springs are common in

some areas and contribute substantially

to streamflow in the summer and fall.

On bottomlands, floodwaters rise and

**Physiography** 

recede quickly.

2430 Broad, flat to nearly flat floodplain

vers and bayous occur.

containing the meander belts of

the present and past courses of the

Mississippi River. Point bars, natural

levees, flood control levees, swales,

meander scars, oxbow lakes, drainage

ditches, and meandering, low gradient,

regular braided bars, and interfluves.

Includes low gradient rivers, bayous,

containing terraces, undulating sand

sheets, sand dunes, depressional sand

relict channels, and drained wetlands.

Streams are extensively channelized. An

extensive network of drainage ditches

alternating swales and ridges. Water

often collects into marshes, swamps, oxbow lakes, ponds, and low gradient

narrow belt of hills occurs in the east.

the meander belts of the present and

past courses of the White, Black, and

Cache rivers. Point bars, natural levees.

swales, meander scars, oxbow lakes, and low gradient rivers occur.

relict patterns of branching channels,

depressions, and interfluves. Includes

low gradient, extensively channelized

rivers, and creeks that have silty substrates. Drainage ditches occur.

irregular braided bars, dunes, interdunal

past courses of the lower Arkansas and

Ouachita rivers. Point bars, natural

levees, swales, abandoned channels,

gradient rivers and bayous occur.

drained flats broken by alternating

swales and ridges. Water often collects

into its marshes, swamps, oxbow lakes,

ponds, and sloughs. Some low gradient

streams with silty substrates occur. Many drainage ditches occur.

with relict patterns of branching

channels, irregular braided bars, and

interfluves. Low gradient, channelized

streams and canals with silty substrates

narrow ridges that are dissected or

gullied by intermittent, silt- and sand-

bottomed streams. Ravines occur.

Physiography

278 Low-lying floodplains with poorly-

**73j. Macon Ridge** 236 Wide, flat to irregular alluvial terrace

meander scars, oxbow lakes, and low

blow-outs, sunk lands, interfluves,

and creeks with silty substrates.

Drainage ditches occur.

to moderately dissected, but steep,

narrow valleys. Flat land is uncommon.

valleys occur. Springs are common and east/ Formation.

675 Nearly level to rolling, undissected

or slightly dissected portion of the

Springfield Plateau. Karst features

and are characteristic. Summer flow in

many streams is zero or near zero but

enduring pools fed by interstitial flow

enduring pools fed by interstitial flow

1559 Dissected, rugged mountains with steep Mostly Quaternary colluvium and alluvium.

079 Low mountains, rounded high hills, and Mostly Quaternary colluvium and alluvium.

undulating plateaus. Summer flow in 200-1900; Pennsylvanian sandstone, shale, limy

many streams is zero or near zero but up to sandstone, sandy limestone, and

including caves, sinkholes, and solution | in the | chert of the Mississippian Boone

Moderately to highly dissected, hilly | 300-1850/ | Quaternary cherty clay solution

MISSISSIPPI ALLUVIAL PLAIN

Wide, flat to irregular alluvial plain with | 205-240/ | Holocene unconsolidated silty,

258 Wide, flat to irregular alluvial plain | 190-275/ Quaternary sand sheets, Pleistocene

199 Low-lying floodplains composed of 90-240/ Holocene silty and clayey fluvial and

1939 Broad, nearly level terrace with incised | 150-320/ Quaternary windblown silt (i.e., loess)

1299 | Flat to nearly flat floodplain containing | 130-300/ | Holocene sandy, silty, clayey, and

88 Wide, flat to irregular terraces with 150-320/ Quaternary windblown silt (i.e., loess)

1509 | Flat to nearly flat floodplain containing | Mostly | Holocene sandy, silty, clayey, and

the meander belts of the present and 110-260/ gravelly alluvium.

perennial and intermittent streams. A | 10-50 | veneers Pleistocene terrace deposits

5-20 gravelly alluvium.

poorly-drained flats that are broken by less than lacustrine deposits that are locally

relict patterns of branching channels, 5-20 sandy, and gravelly alluvium overlies

Geology

Surficial and Bedrock

Pennsylvanian sandstone, shale, limy

Sideslopes: interbedded sandstone.

are often underlain by interbedded

Geology

Surficial and Bedrock

sandstone, siltstone, and shale.

150-800 | capped by resistant sandstone. Sideslopes | Ultisols (Hapludults), Alfisols

sandstone, sandy limestone, and

capped by resistant sandstone.

2300/ siltstone. Mountaintops are usually

uplands and limited amounts of alluvium.

are lowest | Extensive limestone and interbedded

50-800 residuum, colluvium, and alluvium. On

| Moderately to highly dissected portion | 540-1800/ | Quaternary cherty silty to sandy clay | On uplands: Ultisols

of the Mississippian Boone Formation.

Mississippian or Devonian Chattanooga

150-800 | solution residuum, silty sand to sandy silt | (Fragiudults, Paleudults,

and Jefferson City Dolomite are common (Udifluvents).

100-600 | limestone are extensive and often cherty; | Mollisols (Hapludolls). On

decomposition residuum, colluvium, and | Hapludults), Alfisols

imited amounts of alluvium. Dolomite, (Hapludalfs), Mollisols

Shale and Ordovician Cotter Dolomite.

chert, and limestone occur and are

but, near the southern boundary,

1700/ colluvium, and alluvium. Dolomite and

interbedded sandstone and shale also

occur. Includes Ordovician Jefferson

Dolomite, Everton Formation, and St.

Geology

Surficial and Bedrock

Pleistocene glacial outwash deposits.

unconsolidated alluvial sand, silt, and

(composed of alluvial sand, silt, and

veneers Quaternary sand sheets,

terrace deposits (composed of

less than and lacustrine deposits that are locally

95-145/ Quaternary windblown silt (i.e., loess)

composed of alluvial sand, silt, and

clay), and Pleistocene glacial outwash

Surficial and Bedrock

100-175 loess), silt, sand, and gravel. Tertiary

sands, gravels, and clays.

5-30 veneers Pleistocene terrace deposits

common.

MISSISSIPPI VALLEY LOESS PLAINS

799 Disjunct low, steeply to gently sloping, 275-500/ Pleistocene windblown silt deposits (i.e., Alfisols (Hapludalfs,

Quaternary sand dunes, Pleistocene

unconsolidated alluvial sand, silt, and

100-250/ Holocene silty, clayey, or loamy fluvial Vertisols (Epiaguerts,

10 organic-rich. Natural levee deposits are (Hapludolls), Inceptisols

gravel), and Pleistocene glacial outwash

gravel), and Pleistocene glacial outwash (Epiaquerts, Dystraquerts),

terrace deposits (composed of

100-265/ Holocene alluvial sand, silt, clay, and

Mostly Quaternary cherty silty to sandy clay

250-1400; solution residuum, silty sand and

Peter Sandstone.

maximum sandy silt decomposition residuum,

ometimes interbedded with sandstone

Mississippian Boone Formation occurs.

Along deeply entrenched rivers: early-

300-900 siltstone. Mountaintops: generally

Order (Great Group)

Jplands: Ultisols (Hapludults,

Ultisols (Hapludults), Entisols

Uplands: Ultisols (Hapludults

Order (Great Group)

agiudults). On uplands

inderlain by sandstone:

Ultisols (Hapludults). On

floodplains or low terraces:

Iltisols (Paleudults.

Fragiudults), Alfisols

Mollisols (Hapludolls).

(Hapludolls). On narrow

Iltisols (Paleudults.

Hapludults, Fragiudults).

floodplains or low terraces:

Inceptisols (Eutrudepts),

Order (Great Group)

Udifluvents, Udipsamments),

Epiaquepts), Entisols

Alfisols (Hapludalfs,

(Dystraquerts)

Udifluvents)

Endoaqualfs), Vertisols

Alfisols (Albaqualfs,

Endoaqualfs), Vertisols

Epiaquerts), Inceptisols

Epiaquepts), Entisols

Alfisols (Endoaqualfs,

Natraqualfs, Hapludalfs,

Fragiaqualfs), Vertisols

Inceptisols (Endoaquepts,

**Údifluvents**, Fluvaquents,

Epiaquepts), Entisols

Vertisols (Dystraguerts.

Epiaquerts), Mollisols

Fragiudalfs, Albaqualfs,

Fraglossudalfs, Glossaqualfs,

Natraqualfs). Slowly to very

inceptisols (Endoaquepts),

slowly permeable soils and

agipans are common.

Endoaqualfs, Hapludalfs),

Alfisols (Natraqualfs,

Vertisols (Epiaquerts),

Mollisols (Hapludolls)

Alfisols (Fraglossudalfs,

Hapludalfs), Vertisols

Alfisols (Hapludalfs,

Epiaqualfs), Vertisols

(Epiaquerts), Inceptisols

(Epiaquepts, Eutrudepts),

Entisols (Udipsamments,

Hapluderts), Mollisols

(Epiaquepts), Alfisols

Endoaqualfs, Hapludalfs)

agiaqualfs, Epiaqualfs).

Order (Great Group)

agiudalfs), Ultisols

Entisols (Fluvaquents).

Experiment Station, 27p.

Hapludults), Inceptisols

(Eutrudepts). On floodplains:

ertisols (Epiaquerts),

Inceptisols (Epiaquepts),

Mollisols (Hapludolls)

Udifluvents)

Epiaquerts)

ragiaqualfs, Fragiudalfs,

Glossaqualfs, Natraqualfs,

(Hapludolls)

(Hapludalfs).

floodplains and low terraces:

Alfisols (Hapludalfs), Entisols

limestone: Ultisols (Paleudults, | cherty limestone: Noark,

Paleudults, Fragiudults).

Terraces and floodplains

Entisols (Udifluvents),

(Hapludalfs), Mollisols

Hapludolls).

260-1600; Quaternary cherty clay solution residuum On uplands underlain by cherty On uplands underlain by

uplands: limestone and interbedded chert (Hapludalfs, Paleudalfs),

aleudults, Fragiudults).

Terraces and floodplains

Udifluvents).

Common Soil Series

Uplands: Enders, Nella.

upland soils have low

Steprock, Mountainburg,

Leesburg, Sidon, Nauvoo;

natural fertility. Terraces and

floodplains: Spadra, Ceda.

Jplands: Enders, Nella,

Mountainburg, Steprock,

widespread than in west.

On floodplains and terraces

Ceda, Cleora, Razort, Spadra.

Jpland soils have low natural

Common Soil Series

Clarksville, Nixa, Captina,

by sandstone: Linker,

or low terraces: Secesh,

Clarksville, Nixa, Noark,

Arkana, Moko, Portia, Estate

On uplands: Arkana, Moko,

Portia. On floodplains: Razort,

Doniphan, Gassville, Nixa,

Clarksville, Noark, Estate.

On uplands underlain by

cherty carbonates: Gepp,

Doniphan, Arkana, Agnos,

Ventris, Gassville, Moko,

Captina, Eldon. On cherty

idgetops and upper slopes:

Clarksville. On sandstone

Brocket, Lily, Portia. On

Hontas, Sturkie, Razort.

bottomland soils.

floodplains or low terraces:

Upland soils are stony, thin droughty, and shallower than

Common Soil Series

Robinsonville, Tunica,

Alligator, Dubbs, Dundee,

Sharkey, Newellton, Bruno,

Sharkey, Steele, Crowley,

Dundee, Amagon, Sharkey,

Commerce, Steele, Crevasse,

Alligator, Sharkey, Tunica,

oring, Crowley, Stuttgart,

Kobel, Commerce, Sharkey,

Forestdale, Rexor, Tichnor,

Calloway, Henry, Loring,

Jackport, Foley, Hillemann

Crevasse, Bruno, Keo,

Sharkey, Desha, Portland,

Norwood, Sharkey

Yorktown, Alligator

Calloway, Henry, Grenada,

Perry, Portland, Sharkey,

Desha, Hebert, McGehee

Memphis, Grenada, Calhoun,

Foley, Egam, Staser, Dundee, Aquic, Udic

Perry, Portland, Rilla, Hebert, Thermic/

Hebert, Perry, Rilla, Moreland, Aquic, some

Calloway, Calhoun,

Hillemann, McKamie

Alligator, Tunica, Hayti

Mhoon, Foley, Dubbs, Henry,

Dundee, Tunica

ommerce, Crevasse, Convent, Thermic/

Aquic, Udic

Thermic/

Aquic, Udic

Thermic/

Thermic/

Aquic, some

Thermic/

Udic, Aquic

Thermic/

Udic, Aquic

Udic, Aquic

Thermic/

Udic, Aquic

Thermic/

Udic;

Aquic on

Udic

Aquic, Udic

Tonti. On uplands underlain

Mountainburg. On floodplain:

Nella, Linker, Sidon; in east,

Steprock and Linker are more

Climate

(inches) annual January min/max

Climate

Mean annual (inches) Mean Temperature January min/max

l July min/max (°

(days) July min/max (°F

24/48:

Temperature/ | Precipitation | Frost Free |

The east is

moister than

the west.

Temperature/ | Precipitation | Frost Free |

rainshadow

of the

Boston

are in the

ainshadow

Boston

Mountains.

facing slopes

receive more

precipitation

than valleys.

Temperature/ | Precipitation | Frost Free |

Moisture | Mean annual | Mean |

(inches) annual

48-54 | 210-220 |

48-50 | 210-220 |

48-52 | 200-220 |

48-54 | 210-240 |

46-52 | 210-230 |

48-55 | 220-240 |

48-55 | 220-240 |

Climate

(days) July min/max (°F)

28/52;

Temperature/ | Precipitation | Frost Free |

(inches) annual

46-52 | 210-220 |

Thermic/ 46-52 210-230

Climate

30/58;

28/54;

28/54;

of the

44-48. Parts | 185-195

Mountains.

Thermic/ are in the

Udic

Mesic/

Thermic/

Thermic/

Moisture | Mean annual | Mean |

52-54 | 170-200

**Vegetation** 

forest and oak woodlands are native. Today, on upland areas:

Potential natural vegetation: oak-hickory-pine forest and oak-

hickory forest. Mixed oak and oak-pine forests, woodland, or

hickory, and shortleaf pine are native. On lower, drier south- and

west-facing sites: shortleaf pine. On narrow floodplains and low

Potential natural vegetation: oak-hickory forest and some oak-

hickories, birch, American elm, and American sycamore.

maple, white oak, northern red oak, and beech.

Potential natural vegetation: oak-hickory-pine forest and oak-

in the west, oak–hickory–pine forest. Native on uplands: mixed

deciduous forest (containing black oak, white oak, blackjack oak,

post oak, and hickories) and also mixed deciduous–shortleaf pine

and limestone: glades consisting of eastern redcedar, Ashe juniper,

native grasses, and sparse populations of post oak and elm.

sycamore, willow, eastern cottonwood, maples, birch, and ash.

Vegetation

Potential natural vegetation: southern floodplain forest. Native

dominated by pure stands of black willow. Point bars: diverse

Drier sites on the floodplain margins had willow oak, water oak,

cherrybark oak, and swamp chestnut oak; these species, along with pecan and cottonwood, occupied natural levees within the floodplain

Potential natural vegetation: southern floodplain forest. Native

green ash, and sweetgum. Native on wettest areas (e.g., depressions and relict braided channels): bald cypress, water tupelo, and overcup

oak. Native on ridges: Nuttall oak, willow oak, cherrybark oak.

Sandy terraces supported natural grasslands (possibly of Native

Potential natural vegetation: southern floodplain forest. Native

areas: bald cypress-water tupelo forest. Less frequently flooded

sites: overcup oak, Nuttall oak, willow oak, water hickory, elm,

Potential natural vegetation: southern floodplain forest. Native

by oak communities. Eastern cottonwood, green ash, cherrybark

Potential natural vegetation: southern floodplain forest. Native

sweetgum, water tupelo, and bald cypress; in limited areas,

vegetation is bottomland hardwood forest with an abundance of

loblolly pine also occurred. Native on Pleistocene dunes: white

oak-black oak-southern red oak forest or post oak woodland. In

water hickory, and pin oak with the federally-endangered shrub,

Potential natural vegetation: southern floodplain forest. Native

vegetation is bottomland hardwood forest/woodland containing

cottonwood, elm, hackberry, pecan, sycamore, willow, green ash,

oak, overcup oak, sweetgum, sycamore, and water hickory. In wet

Potential natural vegetation: southern floodplain forest. Native

by willow oak, Nuttall oak, and water oak along with forested

canebrakes containing mixed deciduous trees and giant cane.

Potential natural vegetation: southern floodplain forest. Native

vegetation includes bottomland forest (dominants: willow oak,

water oak, and swamp chestnut oak) and upland hardwood forest

(dominants: white oak, southern red oak, and, in drier sites, post

oak); also, tall grass prairies and loblolly pine-dominated areas may

**Vegetation** 

dominates early-successional communities. On sandy soils in the

channels: bald cypress and water tupelo. Palmetto and Spanish moss

cherrybark oak, Nuttall oak, swamp chestnut oak, water oak, willow rice, and wheat.

dune depressions or sandponds: forests dominated by overcup oak,

oak, Nuttall oak, water oak, willow oak, and sweetgum are common.

by upland oaks, hickory, elm, maple, and locust.

willow oak, and swamp chestnut oak.

American origin).

green ash, and sweetgum.

pondberry, in the understory.

have occurred

north: shortleaf pine.

occur and are at their northern limit.

species that are typical of higher bottomlands such as Nuttall oak, main crops.

overcup oak, Nuttall oak, willow oak, water hickory, American elm, the main crops.

southern red oak, and white oak.

Potential natural vegetation: oak-hickory forest. Mixed deciduous Mostly wooded; clearings are used as

northern red oak, white oak, pignut hickory, and mockernut hickory. uses: logging and recreation. Stream

Today, on narrow floodplains and low terraces: sweetgum, willows, water quality is often exceptional;

birch, American sycamore, hickories, southern red oak, and white during periods of low flow, turbidity

savanna occur on uplands; northern red oak, white oak, post, scarlet, | are used as pastureland or hayland.

terraces: sweetgum, willows, birch, American sycamore, hickories, of low flow, turbidity, mineral,

hickory-pine forest. Prior to the 19th century, savanna or tall grass hayland, or expanding residential

prairies were common and maintained by fire. Native on uplands: development. Limited areas produce

mixed deciduous forest (containing black oak, white oak, blackjack small grains, orchard fruit, grapes,

oak, post oak, and hickories) with some mixed deciduous–shortleaf or vegetables. Most farm income is

pine forest. Native on floodplains and low terraces: willows, maples, from poultry, cattle, or hogs. In most

hickory forest. Native on uplands: oak—woodland, mixed deciduous | sloping ridgetops: cleared areas. In

oak, blackjack oak, post oak, hickories, and shortleaf pine. Native land uses are woodland grazing,

Potential natural vegetation: oak-hickory forest, cedar glades, and, Uplands: mostly covered by forest

forest. Native on driest sites with shallow, rocky soils over dolomite | pastureland; only limited cropland

Potential natural vegetation: oak-hickory forest, oak-hickory-pine Gently sloping areas are pastureland,

on uplands: mixed forest containing blackjack oak, post oak, black soils are covered by forest or savanna.

tree cover with herbaceous ground cover. Native on north-facing farming, logging, hay production, and

oak, northern red oak, and beech. On shallow, rocky, droughty cropland is very small and is usually

soils underlain by dolomite or limestone: cedar glades. Native on restricted to floodplains, terraces, and

forest, and scattered cedar glades. Forest, savanna, glades, barrens, hayland, or house sites. Steeply

oak, white oak, hickories. On droughty, rocky slopes: post oak,

Primary land uses are livestock

floodplains and low terraces: southern red oak, white oak, American | gently sloping uplands.

vegetation is bottomland hardwood forest and woodland. Sandbars: | forest and forested wetlands.

forests of cottonwood, sugarberry, sycamore, green ash, and pecan. and sorghum are the main crops.

vegetation is bottomland hardwood forest and woodland containing corn, wheat, rice, and sorghum are the

Potential natural vegetation: southern floodplain forest. Native Mostly cropland. Soybeans, corn,

vegetation is bottomland hardwood forest and woodland containing cotton, wheat, sorghum, and rice are

vegetation is bottomland hardwood forest, woodland, and forested cropland, and pastureland. Cotton,

Potential natural vegetation: oak–hickory forest. Native vegetation Mostly cropland. Rice, soybeans,

is mostly tall grass prairie dominated by big bluestem, Indiangrass, cotton, corn, and wheat are the

and switchgrass. In addition, open woodland and savanna dominated | main crops. Wetlands and rice fields

vegetation is bottomland hardwood forest and woodland dominated | Soybeans, rice, sorghum, corn, and

green ash, bottomland oaks, American elm, cottonwood, sugarberry, sorghum, soybeans, cotton, corn, and

vegetation is bottomland hardwood forest and woodland dominated and extensive cropland. Areas cleared,

canebrakes of open, mixed deciduous trees and giant cane. Wettest soybeans, corn, wheat, and sorghum

Broad, flood-prone flats: sugarberry, American elm, and green ash. Commercial catfish production

blackjack oak, and shortleaf pine. On thin soils: barrens with sparse farming (cattle and hogs), poultry

and upland prairies occurred prior to the nineteenth century. Native | sloping areas with shallow, stony

forest, or mixed deciduous–pine forest containing black oak, white | narrow valleys: pastureland. Primary

on north-facing slopes and in ravines: mesic forest containing sugar logging, livestock farming, recreation,

black, blackjack oak, pignut hickory, shagbark hickory, mockernut Logging and recreation are important

**Land Cover and Land Use** 

and mineral, biochemical, nutrient, and uspended solid values are very low.

Mostly forest and woodland; becomes

more open to the west. Flatter areas

land uses. Stream water quality is

often exceptional; during periods

solid values are very low.

biochemical, nutrient, and suspended

**Land Cover and Land Use** 

rugged, rocky, or poorly-drained

Mostly woodland or forest. On gently

cleared and are used as pastureland

specialty crops occurs. Primary land

uses are forest grazing, livestock

farming, logging, recreation, and,

especially near reservoirs and lakes.

**Land Cover and Land Use** 

Sovbeans, cotton, corn, wheat, rice

Deciduous forest, forested wetlands,

are the main crops. Commercial

catfish production is also common.

provide habitat for waterfowl. Duck

and goose hunting occurs.

Deciduous forest and cropland.

Mostly cropland; also deciduous

forest and forested wetlands. Rice,

wheat are the main crops. Commercial

crawfish, baitfish, and catfish farms

are common. Serves as a wintering

ground for water fowl. Duck hunting

some deciduous forest and forested

wetlands. Crops are mainly soybeans,

Deciduous forest, forested wetlands,

drained, and protected by levees grow

astureland deciduous forest and

ropland. Sovbeans, cotton, oats.

**Land Cover and Land Use** 

wheat, and rice are the main crops

Commercial fish farms occur.

rice, cotton, soybeans, and wheat.

s seasonally common.

cotton are the main crops.

or havland. Larger valleys: mostly

producing corn, soybeans, and

quarrying, and housing.

Level IV Ecoregion		Physiography		Geology	Soils			Climate			Vegetation	Land Cover and Land Use
	Area (square miles)		Elevation/ Local Relief (feet)	Surficial and Bedrock	Order (Great Group)	Common Soil Series	Temperature/ Moisture Regimes	Precipitation Mean annual (inches)	Frost Free Mean annual (days)	Mean Temperature January min/max; July min/max (°F)		
35a. Tertiary Uplands	5761	Rolling plain with occasional low sandhills. Most streams do not flow in the summer but spring-fed streams in the sandhills have perennial flow.	100-500/ 50-300	Quaternary alluvium along streams. Poorly-consolidated Tertiary coastal plain and marginal marine deposits containing noncalcareous sand, silt, clay, and gravel are extensive and locally carbonaceous or glauconitic.	Ultisols (Hapludults, Paleudults, Fragiudults), Entisols (Quartzipsamments)	Sacul, Smithdale, Sawyer, Saffell, Savannah, Pikeville, Darco, Bowie. Most soils are well-drained. Soils tend to be low in nutrients and low in organic material. On sandy hills: Alaga, Kirvin, Briley, Sacul.	Thermic/ Udic	48-54	210-240	32/58; 70-94	Potential natural vegetation: oak—hickory—pine forest. Mixed shortleaf pine—loblolly pine forest and upland deciduous forest is native. Today, loblolly pine is dominant and shortleaf pine, upland oaks (e.g., white, post, and red oaks), hickories, and sweetgum occur. On sandhills: stunted trees with sparse ground cover; sandhill woodland communities include Arkansas, bluejack, and margaretta oaks. In riparian areas: bottomland forest.	Mostly commercial pine plantations forest, pastureland, hayland, and woodland. Watermelons, peanuts, alfalfa, small grains, and vegetables are grown in limited areas. Poultry farming occurs. Oil and gas are produced in the region.
35b. Floodplains and Low Terraces	1409	Nearly level floodplains and low terraces. Natural levees, swales, oxbow lakes, and meander scars occur. Many areas are frequently flooded and wetlands are common.	50-250/ 10-50	Holocene alluvium.	On floodplains: Alfisols (Glossaqualfs), Inceptisols (Dystrudepts, Endoaquepts), Entisols (Udifluvents). On low stream terraces: Ultisols (Endoaquults, Albaquults, Paleaquults, Paleaquults, Fragiudults), Alfisols (Glossaqualfs).	On frequently flooded floodplains: Guyton, Ouachita, Sardis, Wehadkee, Ochlockonee, Collins. On low stream terraces: Amy, Smithton, Sardis, Gurdon, Stough, Caddo, Prentiss, Leaf.	Thermic/ Aquic, some Udic	48-54	210-240	32/58; 70-94	Potential natural vegetation: southern floodplain forest and oak—hickory—pine forest. Native on better drained sites: southern red oak, white oak, hickories, and loblolly pine. Native on natural levees that are not subject to prolonged flooding: red maple, river birch, sycamore, and American elm. Native on periodically flooded sites: Nuttall oak, willow oak, sweet gum, water oak, swamp chestnut oak, Shumard oak, and green ash. Native on sites submerged for long periods: water hickory, green ash, and overcup oak. Native on sites flooded for very long periods or permanently flooded: bald cypress and swamp tupelo.	Mainly forested wetlands and deciduous forest. Cleared areas are primarily used as pastureland. On better-drained, flood protected sites: cropland producing hay, soybeans, corn, sorghum, cotton, and peanuts. Wetness and flooding are the main limitations to farming. Forest grazing is common.
35c. Pleistocene Fluvial Terraces	3352	Broad, flat to undulating stream terraces. Includes, from lowest to highest elevation, the Deweyville, Prairie, and Intermediate terrace levels. Dissection and age increases with elevation. Mounds occur on the Prairie Terrace. Seeps can occur where terrace levels abut. Stream water is stained by organic matter and is mildly acidic.	150-300/ 10-50	Quaternary windblown silt deposits (i.e., loess) and Pleistocene fluvial terrace deposits containing sequences of unconsolidated gravels, sandy gravels, sands, silty sands, silts, clayey silts, and clays.	Alfisols (Glossaqualfs, Fraglossudalfs, Paleudalfs, Fragiaqualfs), Ultisols (Endoaquults, Fragiudults, Paleaquults, Paleudults)	Wrightsville, Amy, Caddo, Pheba, Calloway, Grenada, Savannah, Smithton, Falkner, Henry, Prentiss, Stough. Clay-rich, poorly-drained soils are common. On flats: heavy soils are saturated during rainy periods and dry and hard at other times (i.e., hydroxeric). Locally, fragipans further inhibit drainage. On the Prairie Terrace: windblown silt deposits (i.e., loess) less than 18 inches thick overlie clayey subsoils.	Thermic/ Aquic, Udic	48-55	220-245	32/58; 70-94	Potential natural vegetation: oak-hickory-pine forest. On broad flats: extensive pine flatwoods adapted to seasonally wet conditions. They are often woodlands rather than forest and are dominated by loblolly pine and oaks; the seasonal wet-dry regime (i.e., hydroxeric regime) favors loblolly pine over shortleaf pine. On mounds: large pines. On the Deweyville Terrace: extensive hardwood wetlands. On the Prairie Terrace: extensive flatwoods, pine savanna, and, on extremely hydroxeric sites drained by back-cutting streams, some prairies.	Mainly forest, woodland, savanna, and wetland. Logging occurs. Cleared areas are used as pastureland hayland, or cropland. Ecoregion 35c is an important breeding ground for amphibians.
35d. Cretaceous Dissected Uplands	1234	Nearly level to hilly uplands that are dissected by stream valleys. A few low cuestas occur; these asymmetric ridges have a short, steep escarpment on one side, and a long, gentle slope on the other.	100-550/ less than 50-350	Quaternary alluvium near streams. Poorly-consolidated, often calcareous, Cretaceous clays, sands, or gravels.	Ultisols (Hapludults, Fragiudults, Paleudults)	Smithdale, Sacul, Savannah, Sawyer, Saffell. Most soils are well- or moderately well- drained and prone to erosion if disturbed.	Thermic/ Udic	48-54	200-240	30/58; 69-94	Potential natural vegetation: oak-hickory-pine forest. The native vegetation is mixed pine and upland deciduous forest. In natural woods, shortleaf pine is more abundant than loblolly pine. On northern sites rich in cherty gravels from the Ouachita Mountains: shortleaf pine dominates.	Mostly woods and pastureland but a few prairie remnants occur. Importational land uses include logging, livestock farming, and poultry production. A few areas are used for cultivated croincluding corn, cotton, soybeans, ha and small grains. Streams draining pastureland have lower water quality than those draining wooded areas.
35g. Red River Bottomlands	603	Broad, level to nearly level floodplains and low terraces with oxbow lakes, meander scars, backswamps, natural and artificial levees, and drainage ditches.	175-320/ 10-50	Holocene alluvium.	On floodplains: Entisols (Udifluvents). On broad flats and in slack water areas that were backswamps: Vertisols (Hapluderts, Epiaquerts). On natural levees: Alfisols (Hapludalfs), Mollisols (Argiudolls). On stream terraces and flats: Alfisols (Glossaqualfs, Epiaqualfs).	On floodplains: Severn, Oklared. On broad flats and in slack water areas that were backswamps: Billyhaw, Perry. On natural levees: Rilla, Caspiana. On terraces and broad flats: Wrightsville, Acadia.	Thermic/ Udic, Aquic	48-52	220-245	34-58; 70-94	Potential natural vegetation: southern floodplain forest. Native vegetation includes cherrybark oak, swamp chestnut oak, water oak, willow oak, Nuttall oak, sweetgum, eastern cottonwood, sycamore, hackberry, pecan, green ash, white ash, osage orange, elm, and Western species such as bur oak and Durand oak.	Mostly cropland and pastureland. Alfalfa, soybeans, grain sorghum, cotton, corn, and wheat are the main crops. On poorly-drained flats: some deciduous forest remnants. The Red River is almost continuously turbid.
35h. Blackland Prairie	576	Level to rolling. A few cuestas occur.	250-500/ less than 50-150	Cretaceous marls, chalks, and limestones.	Vertisols (Dystruderts), Inceptisols (Eutrudepts), Alfisols (Paleudalfs)	Oktibbeha, Sumter, Kipling; these soils formed in clayey calcareous sediments and are very slowly to slowly permeable.	Thermic/ Udic	48-54	200-240	30/58; 69-94	During and shortly after the Hypsithermal Period, prairie was common or dominant. At the beginning of the 19th century, both woodland and savanna were common and scattered, and small prairies occurred. Today, woodland composition is principally loblolly pine and shortleaf pine; red oak, white oak, post oak, sweetgum, and dogwood also occur. On droughty soils of cuesta scarps: remnants of prairie that are often degraded.	Hayland and, especially, pastureland are common. A few prairie remnants occur. Some blackland prairies have been restored such as in the Rick Evans Grandview Prairie Wildlife Management Area near Columbus.

<b>Level IV Ecoregion</b>		Physiography		Geology	Soils			Climate			Vegetation	<b>Land Cover and Land Use</b>
	Area (square miles)		Elevation/ Local Relief (feet)	Surficial and Bedrock	Order (Great Group)	Common Soil Series	Temperature/ Moisture Regimes	Precipitation Mean annual (inches)	Frost Free Mean annual (days)	Mean Temperature January min/max; July min/max (°F)		
36a. Athens Plateau	1573	Open hills and low, parallel, east to west trending ridges. Many streams run north to south, crossing the ridges. Waterfalls occur.	400-1100; uplands are lowest in the east/ usually 50-300; maximum 400	Quaternary colluvium. Mostly folded and faulted Mississippian shale interbedded with fine sandstone; Stanley Shale is common. Pennsylvanian Jackfork Sandstone forms scattered low ridges.	Ultisols (Hapludults), Alfisols (Hapludalfs), Inceptisols (Dystrudepts)	Zafra, Carnasaw, Sherwood, Bismarck, Bonnerdale, Toine, Pirum, Pickens, Sherless. Gravelly, shaly, or stony areas are common.	Thermic/ Udic	52-57	195-210	30/55; 67/94	Potential natural vegetation: oak-hickory-pine forest. Today, loblolly pine plantations and shortleaf pine dominate while upland oak-hickory-pine forest covers less than 20% of the ecoregion. Loblolly pine is not native.	Mostly evergreen or mixed forest; commercial pine plantations are extensive. Some areas have been cleared for pastureland and hay production. Cattle and broiler chickens are important farm products. Logging and outdoor recreation are important land uses.
36b. Central Mountain Ranges	1064	Rugged mountains with steeply sloping, parallel ridges that are divided by narrow valleys. Areas of open high hills occur. Constricted passages between ridges have waterfalls and rapids. Perennial springs occur.	400-2300/ 200-1100	Quaternary colluvium. Folded and faulted Mississippian, Pennsylvanian, Silurian, and Ordovician sandstone, novaculite (chert), shale, siltstone, and limestone. Cretaceous igneous intrusions and associated hot springs occur. Rock outcrops are common.	Ultisols (Hapludults), Inceptisols (Dystrudepts), Alfisols (Paleudalfs)	Carnasaw, Bismarck, Bigfork, Yanush, Avant, Sherless, Clebit, Pirum. Soils are shallow and usually stony.	Thermic/ Udic	52-66	190-233	29/53; 65/94	Potential natural vegetation: oak-hickory-pine forest. Upland native vegetation is mixed pine-upland deciduous forest. Native forest vegetation includes blackjack oak, post oak, black oak, mockernut hickory, white oak, hickory, eastern redcedar, and shortleaf pine. Novaculite glades occur and are especially common in the Cossatot and Zig-Zag mountains.	Mostly forested. Limited, nearly level land is used as pastureland or cropland. Stream water quality is typically exceptional; nutrient, mineral, and biochemical water quality parameter concentrations are very low. During low flow, streams typically run clear.
36c. Central Hills, Ridges, and Valleys	1217	Open, high hills, wide valleys, and a few mountain ridges. Wetlands occur near the larger streams, especially in the Saline River Basin.	400-1400; uplands are lowest in the east/ 50-700	Quaternary colluvium and alluvium. Folded and faulted Mississippian shale and fine-grained sandstone (dominated by Stanley Shale), Ordovician sandstone, shale, novaculite (chert), siltstone, and limestone, and limited Silurian shale and sandstone.	Mostly Ultisols (Hapludults); also Inceptisols (Dystrudepts) and, along streams, Entisols (Udifluvents).	Carnasaw, Townley, Pirum, Clebit, Bismarck, Sherless; along streams, Ceda.	Thermic/ Udic	52-58	190-210	30/54; 66/94	Potential natural vegetation: oak-hickory-pine forest. Upland native vegetation: mixed shortleaf pine-upland deciduous forest. Native on floodplains and low terraces: southern red oak, willow, elm, birch, maples, sweetgum, and American sycamore. Today, loblolly-shortleaf pine and upland oak-hickory-pine forest types codominate.	Mostly forest and pastureland.
36d. Fourche Mountains	2452	Rugged, east to west trending, narrow-crested mountain ridges that are separated by narrow valleys and a few wide valleys.	290-2700; uplands are lowest in the east/ 100-1600	Quaternary colluvium and alluvium. Folded and faulted Pennsylvanian sandstone and shale. Rock outcrops are common.	Ultisols (Hapludults, Paleudults, Fragiudults), Inceptisols (Dystrudepts). On floodplains and stream terraces: Ultisols (Hapludults, Fragiudults, Paleudults), Alfisols (Hapludalfs), Entisols (Udifluvents).	Carnasaw, Pirum, Octavia, Clebit, Sherless, Caston, Mountainburg, Linker, Leadvale. In broad valleys on floodplains and stream terraces: Spadra, Leadvale, Kenn, Cane, Neff, Avilla, Ceda.	Thermic/ Udic	50-62	190-210	30/52; 66/95	Potential natural vegetation: oak-hickory-pine forest. Upland native vegetation is mixed shortleaf pine-upland deciduous forest. In wide valleys, native vegetation is woodland or forest. Loblolly pine is native only to wet lowland sites such as riparian areas. Today, pine-oak forest, oak forest, loblolly-shortleaf pine forest, or oak-pine forest occur. On highest ridgetops (including Rich Mountain in Polk County): white oak and post oak forests and woodlands stunted by ice and wind are found; here, the only montane communities in Arkansas occur. North-facing, steep slopes: mesic vegetation including sugar maple and cucumber magnolia. South-facing slopes: drier forests dominated by shortleaf pine. Steep south-facing sites: grassy woodland areas.	Steeper areas: mostly forested. Broad, gently sloping valleys: mainly forest, pastureland, and hayland. Stream water quality is typically exceptional. Nutrient, mineral, and biochemical water quality parameter concentrations are very low. Turbidity is often higher than elsewhere in the Ouachitas.
36e. Western Ouachitas	5	Mountains with steep-sided ridges divided by narrow valleys.	1000- 2310/ 400-1300	Quaternary colluvium and alluvium. Folded and faulted Pennsylvanian Jackfork Sandstone.	Mostly Inceptisols (Dystrudepts) and, along streams, Entisols (Udifluvents).	Clebit; along streams, Ceda.	Thermic/ Udic	56-62	190-210	30/54; 66/94	Potential natural vegetation: oak-hickory-pine forest. Upland native vegetation: mixed pine-oak and oak woodlands and forests. Native on floodplains and low terraces: southern red oak, willow, elm, birch, maples, sweetgum, and American sycamore. Today, pine and upland oak-hickory-pine forest types codominate.	Mostly forested.

<b>Level IV Ecoregion</b>		Physiography		Geology	Soils				Climat	e	Vegetation	Land Cover and Land Use
	Area (square miles)		Elevation/ Local Relief (feet)	Surficial and Bedrock	Order (Great Group)	Common Soil Series	Temperature/ Moisture Regimes	Precipitation Mean annual (inches)	Frost Free Mean annual (days)	Mean Temperature January min/max; July min/max (°F)		
37a. Scattered High Ridges and Mountains	891	Disjunct mountains and ridges in the Arkoma Basin.		Quaternary colluvium. Mostly Pennsylvanian sandstone and shale.	Ultisols (Hapludults, Paleudults)	Enders, Mountainburg, Allen, Nella, Linker	Thermic/ Udic	46-62	190-210	26-52; 67/94	Potential natural vegetation: oak—hickory forest and oak—hickory-shortleaf pine forest. Today, savanna, open woodlands, and forest dominated or codominated by upland oaks, hickory, loblolly pine, and shortleaf pine. Oaks include dry- or fire-adapted species such as post oak. On Magazine Mountain: nearly level tops have xeric, stunted woodlands; north-facing slopes at middle and higher elevations support mesic forest; rimrock has many habitats.	Mostly forested. Some less steeply sloping areas are used as pastureland or hayland.
37b. Arkansas River Floodplain	414	Level to undulating floodplains and low terraces containing natural levees, meander scars, oxbow lakes, point bars, swales, and backswamps.	250-440/ less than 50	Holocene alluvium.	Mollisols (Epiaquolls, Argiudolls), Entisols (Udifluvents, Udipsamments), Alfisols (Hapludalfs), Inceptisols (Eutrudepts), Vertisols (Hapluderts, Epiaquerts)	Roellen, Roxana, Dardanelle, Bruno, Crevasse, Severn, Morganfield, Caspiana, Rilla, Gallion, Keo, Moreland, Perry. Soil drainage is variable; flat, clayey soils are poorly-drained but silty, loamy, or sandy soils especially on natural levees are well- to excessively-drained.	Thermic/ Udic, Aquic	41-50; driest in the west.	210-230	28/52; 69/94	Potential natural vegetation: southern floodplain forest. Native vegetation is mixed deciduous forest containing bottomland oaks including bur oak, American sycamore, sweetgum, willows, eastern cottonwood, green ash, pecan, hackberry, elm, and understory grasses.	Mostly cleared, drained, and used as pastureland, hayland or, where flooding is not a major problem, cropland. Soybeans are the most common crop but some corn, rice, and small grains are also grown. In frequently flooded or poorly-drained areas: remnants of deciduous forest.
37c. Arkansas Valley Hills	2771	Mostly hills, valleys, and cuestas; also scattered low mountains that are too small and discontinuous to map as part of Ecoregion 37a.	250-1000; uplands are lowest in the east/ 50-600	Quaternary colluvium and alluvium. Mostly Pennsylvanian sandstone and shale. Easternmost areas: shale, limy sandstone, sandy limestone, siltstone, and fine-grained sandstone.	Mostly Ultisols (Hapludults, Fragiudults). On terraces and floodplains: Ultisols (Hapludults), Inceptisols (Dystrudepts).	Mostly Linker, Mountainburg; also Leadvale, Steprock, Enders, Sidon. On terraces and floodplains: Spadra, Ouachita.	Thermic/ Udic	43-51	200-220	28/52; 68/94	Potential natural vegetation: oak-hickory forest and oak-hickory-pine forest. Common native trees include blackjack oak, post oak, red oak, white oak, hickories, and shortleaf pine. Today, upland oaks, loblolly pine, shortleaf pine, and hickory occur.	On rugged areas including ridge tops: forest. On less rugged areas: extensive pastureland. Logging, poultry operations and livestock farming are important land uses.
37d. Arkansas Valley Plains	2074	Undulating plains with occasional hills and ridges. Plains are open in the west but become increasingly interrupted by hills and ridges toward the east.	Mostly 295-600; maximum 900/ 50-200	Quaternary terrace deposits and alluvium. Pennsylvanian shale, sandstone, coal, and siltstone. Bituminous coal is found in the west and grades to semi-anthracite coal in the east.	Mostly Ultisols (Fragiudults), Alfisols (Glossaqualfs); also Alfisols (Paleudalfs), Ultisols (Paleudults, Fragiaquults). On terraces and floodplains: Inceptisols (Dystrudepts). On scattered hills and ridges: Ultisols (Hapludults).	Mostly Leadvale, Wrightsville, Taft; also Falkner, Pickwick, Ora, Cane, Guthrie. On terraces and floodplains: Barling. On scattered hills and ridges: Mountainburg, Linker.	Thermic/ Udic, Aquic	42-49; driest in the west. In the rainshadow of the Fourche Mountains.	200-210	28/52; 69/94	Potential natural vegetation: oak—hickory forest, oak—hickory—pine forest, and in the extreme western part of Arkansas, cross timbers (dominants: little bluestem—blackjack oak—post oak). Prior to the 19th century, on broad, dry, fire-prone plains in the west, extensive prairie and scattered large oaks were found on shallow, droughty soils. To the east, less extensive prairies and prairie—savanna occurred. In upland depressions and on flats with impermeable, clay-rich soils or pans, wetlands occur. Today, woodlands composed of post oak, black oak, white oak, hickories, maple, beech, elm, loblolly pine, shortleaf pine, and redcedar occur. Near Fort Smith: several thousand acres of Cherokee Prairie still remain and are maintained by regular fires. On prairie mounds: sumac and sassafras.	Mostly converted to agriculture but remnants of woodland and prairie occur. Pastureland and hayland are extensive; cropland is limited and produces soybeans, small grains, and corn. Poultry and livestock farming are important land uses. Historically, western areas were mined for coal using underground and surface methods. Some abandoned mines have been reclaimed. Today, natural gas and limited coal production occurs.

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